

REMARKS

1. Status of the Claims

Independent claims 1 and 31 have been amended to address the Examiner's rejection under 35 USC § 112 and to incorporate the limitations of claims 2 and 9. Claims 2 and 9 have, therefore, been canceled. Claim 13 has been amended to insert the word "claim" which was inadvertently missing. No new matter has been added.

2. Claim Rejections – 35 USC § 112

Claims 1-18, 31-36 and 41 have been rejected under 35 USC § 112, second paragraph. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

The Examiner has objected to the term "large" in the claims as being relative and indefinite. The phrase "a large number of" in claims 1-31 has been replaced with "a plurality of". Support for this amendment can be found in the specification at, for example, page 15, line 1, page 44, line 16 and by the original phrase "large number of" which would be understood by those skilled in the art to support the language "a plurality of".

Reconsideration and withdrawal of the rejection, are therefore, requested.

3. Claim Rejections – 35 U.S.C. § 103

The claims have been rejected over combinations of Chan, Eddelman, Dzekunov, Lafferty and Blankenstein. These rejections are respectfully traversed.

In the Advisory Action, the Examiner asserts that Eddleman is cited only as evidence that it is known in the art to move magnetic sources along the length of a reaction chamber in order to affect magnetic supports within the reaction chamber. However, what field of art does the

Examiner consider relevant? While the art of the Eddelman relates to one wherein the target substances are extracted from the cells or bacteria, etc., the art of the present invention concerns procedures wherein the target substances are introduced or entered into the cells or bacteria, etc. These "arts" are not analogous but rather contrary one another in terms of the direction of migration of the target substances for cells or bacteria, etc.

In regard to the movements of the magnetic source in Eddelman, the magnetic source itself and movement of the magnetic source cannot be applied to Chan without some necessary changes, since the magnetic supports and target substances in Eddelman are distinct from the magnetic supports and hosts in Chan. Thus, the teachings of the two references cannot be simply combined in the matter suggested by the Examiner.

Eddelman uses magnetic supports that are sufficiently larger in size (between 0.1 and 10 millimeters in diameter; column 3, lines 53 to 54 in Eddelman) and sufficiently smaller in number than the target substances so as to hold many target substances on the magnetic supports (the surface of the porous glass may be treated to assist in binding or orienting and binding particular molecules; column 3, lines 40 to 42 in Eddelman). This is distinct, and essentially opposite, from Chan who uses magnetic supports sufficiently smaller in size (50 to 200 nm; column 5, line 12 or a size less than 500 nm; column 5, lines 17 to 18) and sufficiently larger in number than the hosts so as to be able to enter into the hosts. Thus, the number ratio and the size ratio of magnetic supports to hosts in Chan and those to target substances in Eddelman are distinct from one another. Hence, the present invention cannot be achieved by a simple combination of Eddelman and Chan, since even in such a combination there is no magnetic force control unit which controls said magnetic supports to move relatively with respect to said host, by changing the relative position or the velocity between said packing unit or said mixture solution and said magnetic source, or the magnetic force itself due to said magnetic source and adjusts the pressure as in said liquid passage in the present invention.

Although the Examiner asserts that the claims do not require multi-directional fluid flow in the Advisory Action, claim 1 as amended recites that the apparatus comprises a liquid passage through which said mixture solution can pass, and has a pressure adjuster which draws and discharges the solution by adjusting the pressure in said liquid passage, as said magnetic force control unit. Hence, the liquid passage can pass a liquid bi-directionally, namely multi-directionally.

In contrast thereto, with Dzekunov et al., the mixture solution flows in a single direction (upward direction of the drawings, as shown in Fig. 12) in the Flow path, taking the positions of "Prime", "Cells+IHP", "Waste" and "Product", into consideration. Due to this distinction, the present invention is advantageous because the magnetic supports can be sufficiently dispersed in the liquid whereby the magnetic forces come in contact with hosts and are able to efficiently introduce biological material into hosts.

Since the present invention has such remarkable advantages, the present invention is not obvious over the prior art.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact Leonard R. Svensson Reg. No. 30,330 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a 3 month extension of time for filing a reply in connection with the present application, and the required fee of \$555.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: November 18, 2010

Respectfully submitted,

By: 

Leonard R. Svensson
Registration No.: 30,330
BIRCH, STEWART, KOLASCH & BIRCH, LLP
12770 High Bluff Drive
Suite 260
San Diego, California 92130
(858) 792-8855
Attorney for Applicant